



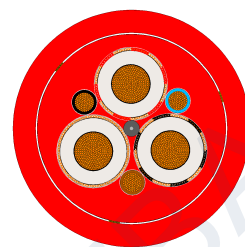
TEBAOFLEX CABLE

DATA SHEET

Mining&Industrial cable

(N)TSCGECECWÖU

8.7/15 kV and 12/20 kV reeling cable



APPLICATION

Flexible cable suitable for reeling drums of tunnel boring machines and general tunnel applications. Suitable for indoor and outdoor applications in demanding mining and industrial environments.

CONSTRUCTION

Component	Description
Phase conductor	Class 5 tinned copper conductor
Insulation	Rubber compound
Semi-conductive layers	Semi-conductive tape over the conductor, plus inner and outer semi-conductive rubber layers on the insulation
Protective earth conductor	Individual copper wire screen
Control conductor	Class 5 tinned copper conductor
Central filler	Semi-conductive compound on a textile polyester support
Inner sheath	Rubber compound
Monitoring conductor	Copper wire screen over the inner sheath
Outer sheath	Rubber compound
Sheath colour	Red

CHARACTERISTICS

- Flexible reeling cable for tunnel boring machines.
- Suitable for indoor and outdoor applications.
- Flame retardant according to IEC/EN 60332-1-2.
- Maximum torsional stress $\pm 25^\circ/\text{m}$.

OPERATING CHARACTERISTICS

Parameter	Value
Voltage rating U_0/U	8.7/15 kV; 12/20 kV
Test voltage	24 kV for 8.7/15 kV; 29 kV for 12/20 kV
Ambient temperature	Fixed -40°C to $+90^\circ\text{C}$; flexed -25°C to $+90^\circ\text{C}$
Minimum bending radius	6 x overall diameter fixed; 10 x overall diameter flexed
Maximum torsional stress	$\pm 25^\circ/\text{m}$

STANDARDS

Parameter	Value
Cable standards	VDE 0250 Part 813, VDE 0295, EN 60228
Flame retardant	IEC/EN 60332-1-2
Regulatory compliance	RoHS Directive ; REACH EC

PACKING

Standard length cable packing on drums; other packing and delivery forms available on request.

TECHNICAL DATA

DIMENSIONS

Values are technical parameters only. Cable dimensions may vary due to manufacturing tolerances.

Voltage kV	Cores	Phase mm ²	Earth mm ²	Control mm ²	Cond. dia. mm	Min OD mm	Max OD mm	Tensile N	Weight kg/km
8.7/15	3+3+3+ÜL	25	25/3E	2.5ST	6.8	48	51.5	1125	3590
8.7/15	3+3+3+ÜL	35	25/3E	2.5ST	7.8	49.5	53.1	1575	3990
8.7/15	3+3+3+ÜL	50	25/3E	2.5ST	9.4	54.4	58.2	2250	4880
8.7/15	3+3+3+ÜL	70	35/3E	2.5ST	11.2	58.2	62.2	3150	5950
8.7/15	3+3+3+ÜL	95	50/3E	2.5ST	12.7	61.4	65.7	4275	7030
8.7/15	3+3+3+ÜL	120	70/3E	2.5ST	14.4	67.4	71.9	5400	8690
12/20	3+3+3+ÜL	25	25/3E	2.5ST	6.8	50.5	54.1	1125	3860
12/20	3+3+3+ÜL	35	25/3E	2.5ST	7.8	52.3	56	1575	4260
12/20	3+3+3+ÜL	50	25/3E	2.5ST	9.4	57.5	61.4	2250	5190
12/20	3+3+3+ÜL	70	35/3E	2.5ST	11.2	61	65.3	3150	6280
12/20	3+3+3+ÜL	95	50/3E	2.5ST	12.7	66.4	70.9	4275	7640
12/20	3+3+3+ÜL	120	70/3E	2.5ST	14.4	70.5	75.2	5400	9050

CURRENT CARRYING CAPACITY

Area mm ²	Floor A	1 layer	2 layer	3 layer	4 layer	5 layer	6 layer	7 layer
25	139	111	85	68	58	53	38	31
35	172	138	105	84	72	65	46	38
50	216	173	132	106	91	82	58	48
70	265	212	162	130	111	101	72	58
95	319	255	195	156	134	121	86	70
120	371	297	226	182	156	141	100	82

Ambient temperature of 30 °C.

VOLTAGE DROP

Area mm ²	PF 0.7	PF 0.8	PF 0.9	PF 1.0
25	1.29	1.45	1.6	1.71
35	0.95	1.06	1.16	1.23
50	0.69	0.77	0.83	0.87
70	0.51	0.56	0.6	0.61
95	0.41	0.45	0.47	0.47
120	0.34	0.36	0.38	0.36

DE-RATING FACTORS

Ambient temp.	10°C	15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C	60°C	65°C	70°C	75°C	80°C
De-rating factor	1.15	1.12	1.08	1.04	1.00	0.96	0.91	0.87	0.82	0.76	0.71	0.65	0.58	0.50	0.41

NOTES

- Current carrying capacity values are stated for the operating conditions shown above.
- Cable dimensions may vary due to manufacturing tolerances.

CERTIFICATIONS



TEBAOFLEX CABLE